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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,914	04/20/2001	John Saarinen	TRW(M)5722	2240

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EXAMINER

WILLIAMS, ERIC M

ART UNIT

PAPER NUMBER

3681

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

09/839,914

Applicant(s)

SAARINEN ET AL.

Examiner

Eric M Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed 8-22-2002 for serial number 09/839914.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borman and in view of Luibrand Patent No. 5,505,276, Bullard et al. 3,886,814, and Harper Patent No. 6,066,060.

Borman (Fig 1) teaches a reservoir (10) with at least one pump (42) connected with the reservoir for pumping fluid between the reservoir and a fluid system (46). Borman discloses in column 1 lines 5-23 and column 2 lines 35-45 the fluid system being used with automotive vehicles such as automatic transmissions, power steering systems and power brake systems whereby a single reservoir (10) may be used for all the systems. Therefore it is inherently understood the fluid system (42) of Borman would draw hydraulic fluid, using the pump (42), to a hydraulic fluid operated automatic transmission for transmitting motive power from an engine of a vehicle to drive wheels of the vehicle and a power steering gear for effecting movement of steerable wheels of the vehicle. However, Borman does not teach a steering gear with a fluid motor.

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Luibrand (Fig. 1) discloses a power steering system with a fluid motor (24). Therefore, it would have been obvious to one of ordinary skill in the art at the time of this invention to modify Borman such that the single reservoir for a fluid system contains a steering gear with a motor, in view of Luibrand, to assist the output movement of the steering mechanism.

Borman also does not disclose a cooler for cooling the hydraulic fluid with the one pump being operative to pump hydraulic fluid between the reservoir and the cooler. However, Bullard et al. (Fig. 1) discloses a cooler (90) for cooling the hydraulic fluid of an engine (16) and transmission system (10) and the cooler contains a transmission pump (98) that pumps the hydraulic fluid between a reservoir (96) a cooler (90), and a transmission (10). Therefore it would have been obvious to one of ordinary skill in the art at the time of this invention to modify Borman's single reservoir for a fluid system such that the system contains a cooler for cooling the hydraulic fluid and a transmission pump being operative to pump the fluid between the reservoir the cooler and the automatic transmission, in view of Bullard, in order to ensure proper cooling of the system.

Borman also does not disclose a filter for filtering fluid to the automatic transmission and steering gear. Harper Patent No. 6,066,060 (Fig. 2) discloses a fluid system with a filter (48) filtering fluid to dual systems on the return path to a pump. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Borman such that the single reservoir for the two systems had a filter on the

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return path to the pump, in view of Harper, to reduce the number of harmful particulates in the fluid.

4. Claims 2, 3, 6, 9, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harper in view of Borman, Luibrand, and Bullard, further in view of Few et al. Patent No. 6,035,903.

Borman and Luibrand in further view of Bullard sets forth all the limitations of claim 1. Luibrand and Bullard disclose a steering gear pump and a transmission pump respectively, and Luibrand explicitly states in column 1 lines 24-30 a predetermined pressure supplied to the power steering system of at least 40 p.s.i. This implies the system must provide a pressure above 40 p.s.i. Bullard does not explicitly state the pressure the transmission pump supplies to the system, but Few et al. discloses a transmission pump supplying a pressure wherein a pressure of 50 p.s.i. is excessive. This implies the transmission pressure is well below the value of 50 p.s.i., and it is furthermore well understood in the art that pressure supplied to the steering gear is relatively high as compared to the pressure supplied to the transmission. Therefore it would have been obvious to one of ordinary skill in the art at the time of this invention to modify Borman's single reservoir for a fluid system such that the fluid system employs a transmission fluid pump at a relatively low pressure for the automatic transmission and a power steering pump at a relatively low pressure, in view of Few, for the purpose of lubrication and proper operation of the transmission and power steering systems.

Luibrand (Fig. 1) teaches a plurality of power steering fluid lines (20,21) for interconnecting the power steering pump (12), the reservoir, and the fluid motor (24)

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and operating the power steering gear. Therefore it would have been obvious to one of ordinary skill in the art at the time of this invention to modify Borman's single reservoir for a fluid system such that a plurality of power steering lines were transmitting fluid between the reservoir, the fluid motor, and the power steering gear, in view of Luibrand, for efficient operation of the power steering system.

It would have been obvious to one of ordinary skill in the art at the time of this invention to modify Borman's single reservoir for a fluid system such that the transmission pump and power steering pump were connected in line and the transmission pump had a first output line for directing hydraulic fluid at relatively low pressure and the power steering pump had a second output line directing hydraulic fluid at a relatively high pressure, in view of Few, for the purpose of manufacturing a system with pumps that are more accessible for maintenance.

5. Claims 7, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borman in view of Luibrand in view of Bullard et al in further view of Hayabuchi et al Patent No. 5,547,436.

Borman in view of Luibrand and Bullard et al. does not disclose a pump operating with a pressure reducer supplying a reduced pressure to the automatic transmission. Hayabuchi (Fig. 1) discloses a transmission system with hydraulic lines and a pressure reducer for supplying a relatively low pressure to a transmission. Therefore it would have been obvious to one of ordinary skill in the art at the time of this invention to modify Borman's single reservoir for a fluid system including a pump such that the pump supplies a relatively low pressure to the steering gear and a relatively high pressure

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through a pressure reducer, in view of Hayabuchi, for more precise manipulation of the pressure supplied to the automatic transmission.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Borman in view of Luibrand in view of Bullard in view of Few et al. in further view of Harper Patent No. 6,066,060.

Borman in view of Luibrand in view of Bullard and in view of Luibrand set forth all the limitations of claim 12 as discussed in the above rejection, but does not disclose a filter for filtering the fluid. Harper Patent No. 6,066,060 (Fig. 2) discloses a fluid system with a filter (48) filtering fluid to dual systems on the return path to a pump. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Borman such that the single reservoir for the two systems had a filter on the return path to the pump, in view of Borman, to reduce the number of harmful particulates in the fluid.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 8, and 12 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments for claims 13 and 14 have been fully considered but they are not persuasive.

Borman '865 discloses a single reservoir employed for multiple automotive systems, such as known hydraulic systems, like power steering and automatic transmission (column 1 lines 5-10). Applicant argues that neither Luibrand nor Bullard teach or suggest a reservoir that may be used for multiple hydraulically powered

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systems because each has a dedicated reservoir. But as disclosed in '865, a single reservoir is used for a plurality of hydraulic systems, therefore, the modification of Borman with the pump of Luibrand and the pump of Bullard is proper. The applicant further argues the references do not suggest using two pumps for a single reservoir, one at a high pressure and one at a relatively low pressure. The pumps of the two systems described in the above rejection do supply the appropriate high and low pressure to each of the two systems. Therefore when Borman '865 is modified with the two pumps, it necessarily supplies low pressure and a high pressure from the single reservoir. The Applicant also argues the references fail to disclose supplying fluid to a pressure reducer from a single pump at a pressure high enough to operate a power steering gear. The system taught by Borman '865 supplies high enough pressure to operate multiple systems and the pressure reducer supplying appropriate pressure to a transmission is known in the art as taught by Hayabuchi '436.

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Conclusion


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M Williams whose telephone number is 703-305-0607. The examiner can normally be reached on Mon. - Fri. from 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



EMW
October 29, 2002



SHERRY ESTREMSKY
PRIMARY EXAMINER
A03681 11-4-02